



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,481	11/28/2000	Dave McDysan	RIC-000-42	7586
25537	7590	02/09/2006	EXAMINER	
MCI, INC 1133 19TH STREET NW 4TH FLOOR WASHINGTON, DC 20036			BATES, KEVIN T	
			ART UNIT	PAPER NUMBER
			2155	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/723,481

Applicant(s)

MCDYSAN ET AL.

Examiner

Kevin Bates

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14, 16-38 and 40-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-38 and 40-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9-26-05
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

***Response to Amendment***

This Office Action is in response to a communication made on November 4, 2005.

The Information Disclosure Statement has been received on September 16, 2005.

Claims 15 and 39 have been canceled.

Claims 1, 16-18, 26, 40-42, and 50 have been amended.

Claims 1-14, 16-38, and 40-50 are pending in this application.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Alles (6466976).**

**Regarding claim 1 and 26**, Alles teaches a access device for use in a programmable access device (Column 2, lines 41 – 43), said access device comprising:  
first and second network interfaces through which packets are communicated with a network (Figure 3, elements 310 and 320);

a packet header filter (Column 10, lines 36 – 47) and a forwarding table, wherein the forwarding table is utilized to forward packets between the first and second network interfaces (Column 10, lines 59 – 65), and wherein said packet header filter identifies messages received at to one of the first and second network interfaces on which policy-based services are to be implemented (Column 10, lines 36 – 47) and passes identified messages via a message interface to an external processor included in said network access system for implementation of the policy-based services by the external processor (Column 9, lines 53 – 55; Column 10, lines 57 – 59), wherein said packet header filter passes all other received messages through the packet header filter to another processor (Column 10, lines 31 – 32); and

a control interface through which said packet header filter and said forwarding table are programmed (Figure 4, elements 470 and 420; Column 11, line 63 – Column 12, line 10).

**Regarding claim 2 and 27,** Alles teaches the programmable access device of claims 1 and 26, wherein the packet header filter receives packets directly from the first network interface (Column 10, lines 36 – 47).

**Regarding claims 4 and 29,** Alles teaches the programmable access device of claims 1 and 26, wherein the packet header filter filters packets for service processing based upon protocol information pertaining to protocol layers higher than layer 3 (Column 10, lines 39 – 42; Column 8, lines 38 – 41).

**Regarding claim 5 and 30**, Alles teaches the programmable access device of claims 1 and 26, and further comprising a policer that polices packets by reference to traffic parameters (Column 13, lines 16 – 20).

**Regarding claims 6 and 31**, Alles teaches the programmable access device of claims 5 and 30, wherein the policer comprises a marker that marks packets that do not conform with the traffic parameters (Column 13, lines 10 – 20).

**Regarding claims 7, 16, 32, and 40**, Alles teaches the programmable access device of claims 1 and 26, and further comprising at a least a usage monitor that monitors at least one traffic type (Column 8, lines 38 – 41).

**Regarding claims 8 and 33**, Alles teaches the programmable access device of claims 7 and 32, wherein the usage monitor has an associated threshold that when exceeded generates a reporting event for the usage monitor (Column 13, lines 1 – 20, where if the service rules are violated, the monitors initiates decrementing the TOS using the classifier, thus the external processor).

**Regarding claims 9 and 34**, Alles teaches the programmable access device of claims 8 and 33, and further comprising a reporting interface that communicates the reporting event to an external processor (Column 13, lines 1 – 20, where if the service rules are violated, the monitors initiates decrementing the TOS using the classifier, thus the external processor).

**Regarding claims 10 and 35**, Alles teaches the programmable access device of claims 9 and 34, wherein the associated threshold comprises a session activity level threshold (Column 10, lines 1 – 20).

**Regarding claim 17 and 41**, Alles teaches the programmable access device of claims 1 and 26, and further comprising a policer that polices packets by reference to programmed traffic parameters (Column 13, lines 10 – 20; Column 11, line 63 – Column 12, line 10).

**Regarding claim 22 and 46**, Alles teaches the programmable access device of claims 1 and 26, and further comprising a plurality of protocol-specific state machines for a respective plurality of protocol types (Column 10, lines 31 – 32).

**Regarding claims 23 and 47**, Alles teaches the programmable access device of claims 22 and 26, wherein said plurality of protocol-specific state machines include a transport control protocol (TCP) state machine that, responsive to a control command, provides preferential treatment to a particular TCP session (Column 7, line 62 – Column 8, line 3; Column 13, lines 1 – 6).

**Regarding claims 24 and 48**, Alles teaches the programmable access device of claims 1 and 26, and further comprising a reporting interface through which the programmable access device reports state information for active sessions to an external processor (Column 8, lines 18 – 29).

**Regarding claims 25 and 49**, Alles teaches the programmable access device of claims 24 and 48, wherein the reporting interface reports the state information for an active session in response to allocation of service to a new external service controller (Column 8, lines 18 – 29).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 19-21 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alles.**

**Regarding claims 19-21 and 43-45,** Alles teaches the programmable access device of claims 1 and 26.

Allles does not explicitly indicate that the identified message is SIP, IGMP, or RSVP.

Examiner takes Official Notice (see MPEP § 2144.03) that "the message protocol between the message identifier and external processors could be SIP, IGMP, or RSVP because they are simple, well known communication protocols between many independent nodes in a network (Column 9, lines 53 – 58) in a computer networking environment was well known in the art at the time the invention was made. The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03, namely, "if applicant traverses such an assertion, the examiner should cite a reference in support of his or her position". However, MPEP § 2144.03 further states "See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, *In re Boon*, 169 USPQ 231, 234 states "as we held in

Ahlert, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight

**Claims 12-14, 18, 37-38 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alles in view of Gai (6167445).**

**Regarding claims 12 and 37,** Alles teaches the programmable access device of claims 1 and 26.

Alles does not explicitly indicate one or more output buffers for outgoing packets.

Gai teaches a plurality of output buffers in a programmable network device (Column 2, lines 43 – 46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Alles' system in order to allow priority queuing and allow packets to have different priorities (Column 2, lines 46 – 57).

**Regarding claims 13,** Alles teaches the programmable access device of claim 12.

Alles does not explicitly indicate a scheduler associated with the one or more output buffers that schedules the transmission of outgoing packets within the one or more output buffers.

Gai teaches a scheduler associated with the one or more output buffers that schedules the transmission of outgoing packets within the one or more output buffers (Column 10, lines 26 – 27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Alles' system in order to allow priority queuing and allow packets to have different priorities (Column 2, lines 46 – 57).

**Regarding claims 14 and 38**, Alles teaches the programmable access device of claims 13 and 37, wherein the scheduler supports multiple quality of service classes (Column 13, lines 9 – 12).

**Regarding claims 18 and 42**, Alles teaches the programmable access device of claims 1 and 26.

Alles does not explicitly indicate one or more output buffers for outgoing packets and an associated scheduler that transmits the outgoing packets from the one or more output buffers through the second network interface according to a programmed methodology

Gai teaches one or more output buffers for outgoing packets and an associated scheduler that transmits the outgoing packets from the one or more output buffers through the second network interface according to a programmed methodology (Column 2, lines 44 – 64; Column 10, lines 26 – 37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Alles' system in order

to allow priority queuing and allow packets to have different priorities (Column 2, lines 46 – 57).

**Claim 11 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alles in view of Natarajan (6505244).**

**Regarding claims 11 and 36**, Alles teaches the programmable device of claims 7 and 32.

Alles does not explicitly indicate a fault monitor.

Natarajan teaches a policy system in a network node that includes a fault monitor (Column 26, lines 12 – 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Natarajan's idea for fault monitoring in Alles' system in order to have better feedback for dynamic adjustments to be made incase of bad performance or errors in the system (Column 2, lines 36 – 43).

**Claims 3, 28, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alles in view of Amara (6674743).**

**Regarding claim 3 and 28**, Alles teaches the programmable device of claims 2 and 27.

Alles does not explicitly indicate that the packet header filter includes packet header filters for each interface port.

Amara teaches that the packet header filter is a first packet header filter (Figure 2, elements 102 and 116), and wherein the programmable access device further

comprises a second packet header filter that receives packets directly from the second network interface (Figure 2, elements 104 and 118).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a packet classifier attached to each interface port as taught in Amara's system in Alles' system in order to allow packets to be identified before any forwarding or switching is performed on them (Column 4, lines 55 – 65).

**Regarding claim 50**, Alles teaches a device for use in a programmable access device (Column 2, lines 41 – 43) comprising:

- a first network interface through which packets are communicated with a first network;

- a second network interface through which packets are communicated with a second network (Figure 3, elements 310 and 320);

- a message interface coupled to an external processor that is configured to implement policy-based services (Column 10, lines 36 – 47);

- a policer configured to discard packets determined as nonconforming to a first traffic parameter (Column 10, lines 61 – 63);

- a packet header filter coupled to the network interfaces and to the message interface, wherein the packet header filter identifies messages, received from the first network interface on which policy based services are to be implements, wherein the packet header filter passes the identified message to the external processor via the message interface (Column 9, lines 53 – 55; Column 10, lines 57 – 59) and passes all

Art Unit: 2155

other message received from the network interfaces to the policer (Column 10, lines 31 – 32); and

a marker configured to discard packets determined as nonconforming to a second traffic parameter (Column 10, lines 61 – 63; Column 13, lines 10 – 20).\

a control interface through which said packet header filter and said forwarding table are programmed (Figure 4, elements 470 and 420; Column 11, line 63 – Column 12, line 10).

Alles does not explicitly indicate that the packet header filter includes packet header filters for each interface port.

Amara teaches that the packet header filter is a first packet header filter (Figure 2, elements 102 and 116), and wherein the programmable access device further comprises a second packet header filter that receives packets directly from the second network interface (Figure 2, elements 104 and 118).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a packet classifier attached to each interface port as taught in Amara's system in Alles' system in order to allow packets to be identified before any forwarding or switching is performed on them (Column 4, lines 55 – 65).

### ***Response to Arguments***

Applicant's arguments filed November 4, 2005 have been fully considered but they are not persuasive.

The examiner argues that in the reference Alles, only the external processor is being programmed by the control interface, not the packet header filter and forwarding

table. The examiner disagrees, as seen in Column 10, lines 31 – 32 and lines 36 – 38 the packet header filter is programmed with channel identifiers that describe which service card, which is an external processor, according to the specific policy type that specific service cards deal with, this is a programmed feature within the program header and also much be inherently programmed when the service cards are programmed in order to keep the filter logic up to date with any policy changes that occur through the user interface so that the channel identifiers match up the policy types that each service card are programmed to handle. So this shows that the policy header filter and forwarding information are programmed to handle packets a certain way and also inherently must be able to be reprogrammed as changes occur within service cards.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2155

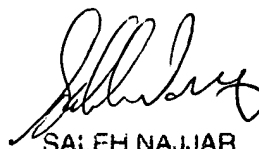
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB  
January 27, 2006



SALEH NAJJAR  
SUPERVISORY PATENT EXAMINER